3.01 COMPATIBILITY ISSUES

The Colorado Springs Regional Joint Land Use Study (JLUS) considered a variety of compatibility issues that relate to impacts of military operations and community growth on one another. The 17 issues examined during the course of this study are shown in Table 3.1. These issues illustrate the many ways in which military personnel and civilians have shared interest in many resources, including, but not limited to, air, land, water, and infrastructure.

Table 3.1
COMPATIBILITY ISSUES - OVERVIEW

<table>
<thead>
<tr>
<th>Issue</th>
<th>AIR FORCE ACADEMY</th>
<th>FORT CARSON</th>
<th>PETERSON AFB</th>
<th>CHEYENNE MOUNTAIN AFS</th>
<th>SCHRIEVER AFB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Coordination</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Land Use Regulations</td>
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<td>x</td>
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<tr>
<td>Safety Zones</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Vertical Obstructions</td>
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<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Security</td>
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<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Noise and Vibration</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dust/Smoke</td>
<td>x</td>
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<tr>
<td>Light and Glare</td>
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<td>Transportation</td>
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<td>x</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>Utility Infrastructure</td>
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<td>Wildfire</td>
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<tr>
<td>Noxious Weeds</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Note: x indicates issue studied related to this installation.
ISSUE IDENTIFICATION

As shown in Table 3.1, not all compatibility issues are applicable to each installation. In addition, not all issues required working groups to explore the issue in depth or identify related strategies. Where existing community plans have identified relevant strategies, that information has been referenced and incorporated into this study to provide guidance to regional stakeholders about the topics described in this section.

To determine the approach needed for each issue, Pikes Peak Area Council of Governments (PPACG) staff initially reviewed publicly available community and military documents to develop a preliminary understanding of issues previously identified. Then PPACG staff met with federal, state, and local government representatives; community organizations; and military officials to understand what compatibility issues they are experiencing as well as what feedback they have received from their respective constituencies. After drafting an initial list of compatibility issues, telephone town hall meetings and an online survey gathered additional input from the public. The survey reinforced which specific issues were of greatest importance to the public and provided additional details about their perceptions of military operations throughout the study area.

In many cases, there are relationships between these issues, and many of the strategies found in Chapter 10 cannot be compartmentalized within only one of the compatibility issues listed in Table 3.1. For example, the compatibility issues of Land Use and Development Review and Interagency and Community Coordination/Communication relate to many of the other compatibility issues.

Figure 3.1

ISSUE IDENTIFICATION PROCESS

DATA GATHERING
Document review and stakeholder interviews

DEVELOP LIST OF INITIAL COMPATIBILITY ISSUES

PUBLIC INPUT
Telephone town halls, online survey, and community presentations

ADDITIONAL REVIEW AND DISCUSSION NEEDED?

YES
Organize working group for additional review and discussion

NO
Develop strategies

PUBLIC INPUT
Community meetings
3.02 COMPATIBILITY ISSUE DEFINITIONS

REGIONAL COORDINATION
This category relates to timing and frequency of communication, coordination, and collaboration related to compatibility issues among military installations, jurisdictions, land and resource management agencies, and conservation authorities.

BUILT ENVIRONMENT AND MILITARY READINESS
Land Use Regulations: The basis of land use planning relates to the local jurisdictions' roles in protecting the public's health, safety, and welfare by ensuring that the use of one property does not negatively impact the use of another. Land use is governed by zoning ordinances and guided by comprehensive plans developed and administered by local jurisdictions.

Safety Zones: Safety zones are areas in which there are higher risks to public safety surrounding aircraft accident potential zones (APZs), flight paths, firing range safety zones, explosive safety zones, and electromagnetic field radiation zones. Safety zones are governed by strict civilian and military protocols and must be protected and properly managed to ensure the success of military missions.

Vertical Obstructions: Vertical obstructions are created by buildings, trees, structures, cell towers, wind turbines, or other features that could encroach into the navigable airspace used for military operations (aircraft approaches, military training routes, and helicopter landing zones).

Security: Installations provide protection from external threats to reduce the vulnerability of individuals, Department of Defense (DOD) personnel (and their families), property, resources, and critical information.

Noise and Vibration: Exposure to high noise levels can have a significant impact on human activity, health, and safety, as well as limited impacts on wildlife and livestock. Sources of noise include, but are not limited to, civilian sources such as vehicular traffic, commercial aircraft, and private aircraft, and military training operations that involve aircraft, ground vehicles, and weaponry. Vibration may also occur because of an impact, explosion, noise, mechanical operation, or other change in the environment created by either civilian or military activities.

Dust/Smoke: Dust results from the suspension of particulate matter in the air. Dust and smoke can be created by fire (e.g., controlled burns, agricultural burns, artillery exercises, and wildfire), ground disturbance (e.g., agricultural activities, military operations, and grading), industrial activities, or other similar processes.

Light and Glare: Artificial lighting from commercial, industrial, recreational, and residential uses at night can cause excessive off-site glare and illumination creating visual disruptions that can interfere with both civilian and military activities.

Transportation: Roadway, railway, and air capacity relates to the ability of existing transportation infrastructure (e.g., highways, arterials, local roads, railroad corridors, airfields, etc.) to provide adequate mobility and access to, from, and between military installations and the surrounding communities.

Utility Infrastructure: This factor covers the extension or provision of new infrastructure (e.g., water, power, and natural gas) near an installation, including from renewable and non-renewable sources.

Stormwater: The combination of development patterns, infrastructure, and characteristics of precipitation events can generate potential stormwater issues that negatively impact transportation networks, military and civilian land uses, and wildlife habitat.
**Compatibility Issues**

**Airspace:** The military requires the use of airspace of an adequate size and quality to accomplish training and operational missions. Competition for this shared resource can impact the future growth of civilian and military uses.

**Frequency Spectrum:** Frequency spectrum impedance and interference refer to the interruption of electronic signals by a structure or object (impedance) or the inability to distribute/receive a particular frequency because of similar frequency competition (interference). Frequency spectrum capacity is critical for maintaining existing and future missions and communications on installations. Advances in consumer electronics have increased use of frequency spectrum and can impact military operations.

**Natural Resource Factors**

**Water Supply:** Military operations and regional development require an evaluation of water supply issues due to Colorado’s variability of precipitation and arid climate, along with state laws regarding water rights that require innovative water supply use and reuse strategies.

**Air Quality:** Pollutants (e.g., particulates, ozone, etc.) can limit visibility and affect the ability to meet state and federal air quality standards. Nonattainment may limit future operations at the installation or in the area.

**Wildfire:** Wildfire is a natural part of local ecosystems and climate fueled by dry conditions and lightning strikes; they may also be caused by human activities. Wildfire prevention is managed through land use planning and logistical coordination between military and local government organizations to minimize associated risks to life, property, and installation missions.

**Noxious Weeds:** Noxious weeds replace native vegetation, reduce agricultural productivity, cause wind and water erosion, and increase the threat of wildfire. Management techniques to control and eradicate invasive species should be coordinated among landowners, local jurisdictions, and military installations.